

DCARML-010

- 2 -

IN THE CLAIMS

Please replace all claims in the instant application with the listing below amending claims 1, 8-10, 25, 29, and 34-36 and canceling claim 7 as follows:

1. (Currently Amended) A lifting sling, said lifting sling comprising:

a plurality of core fibers forming a ~~[said lifting]~~ sling body;

a coating comprised of at least an isocyanate mixed with an amine forming polyurea;

a safety core bonded by said coating proximate to said plurality of core fibers,
ends of said safety core are concealed within said coating;

said coating further comprising:

an initial layer of said coating that seals said plurality of core fibers from exposure to contaminants;

a plurality of additional layers applied to areas of said ~~[lifting]~~ sling body subject to high crush and shear forces; and

a final splatter layer of said coating applied along said ~~[lifting]~~ sling body, said final splatter layer creating a rugged textured non-slip grip exterior surface.

DCARML-010

- 3 -

1 2. (Previously Presented) The lifting sling in accordance with claim 1, wherein said
2 coating is selected from the group consisting of a polyurea elastomer, or a hybrid
3 polyurethane – polyurea elastomer.
4

1 3. (Previously Presented) The lifting sling in accordance with claim 1, wherein said
2 coating has an operational temperature range of –40 to 175 degrees Celsius.
3

1 4. (Previously Presented) The lifting sling in accordance with claim 1, wherein said
2 coating has a tensile strength in the range of up to 6,500 pounds per square inch, an
3 elongation range of up to 300 percent, and a tear resistance in the range of up to 600
4 pounds per linear inch.
5

1 5. (Previously Presented) The lifting sling in accordance with claim 1, wherein said
2 coating includes at least one of the following additives:
3

- 4 i) a catalyst;
5 ii) a stabilizer;
6 iii) a pigment;
7 iv) a fire retardant;
8 v) a static electricity reducing additive;
9 vi) an ultraviolet filtering additive; or
10 vii) a thermal cycling additive.
11

1 6. (Previously Presented) The lifting sling in accordance with claim 1, wherein said
2 plurality of core fibers include at least one of the following:
3

- 4 i) nylon;

DCARML-010

- 4 -

- 5 ii) polyester;
- 6 iii) a synthetic fiber;
- 7 iv) polypropylene;
- 8 v) wire rope;
- 9 vi) steel core;
- 10 vii) cordage rope;
- 11 viii) yarn;
- 12 ix) NOMAX;
- 13 x) KEVLAR; or
- 14 xi) chain.

15

1 7. (Canceled)

2

1 8. (Currently Amended) The lifting sling in accordance with claim 1 [7], wherein said
2 safety core traverses said lifting sling.

3

1 9. (Currently Amended) The lifting sling in accordance with claim 1 [7], wherein said
2 safety core is located, with respect to said plurality of core fibers, in at least one of the
3 following locations:

4

- 5 i) seam located;
- 6 ii) perimeter located; or
- 7 iii) centrally located.

8

1 10. (Currently Amended) The lifting sling in accordance with claim 1 [7], wherein said
2 safety core is interconnected with at least one of the following:

3

DCARML-010

- 5 -

- 4 i) an indicator; or
5 ii) an electronic system.

6

1 11-15. (Canceled)

2

1 16. (Previously Presented) The lifting sling in accordance with claim 1, wherein said
2 lifting sling further comprising at least one of the following:

3

- 4 i) an indicator secured proximate to said plurality of core fibers; or
5 ii) an electronic system secured proximate to said plurality of core fibers.

6

1 17. (Previously Presented) The lifting sling in accordance with claim 16, wherein said
2 electronic system further comprising at least one of the following:

3

- 4 i) a microcontroller;
5 ii) a graphical user interface;
6 iii) a keypad;
7 iv) a touch pad;
8 v) a plurality of general purpose inputs and outputs;
9 vi) a safety core interface;
10 vii) a lifting sling measurement and dynamics interface;
11 viii) an RFID interface;
12 ix) an IRDA interface;
13 x) a transceiver;
14 xi) a wireless data link;
15 xii) a LAN interface;
16 xiii) a WAN interface;

DCARML-010

- 6 -

- 17 xiv) a serial data link;
18 xv) a GPS interface;
19 xvi) a power supply;
20 xvii) a flash memory;
21 xviii) a read only memory;
22 xix) a real time clock;
23 xx) an EEROM; or
24 xxi) a NOVRAM.

25

- 1 18. (Previously Presented) The lifting sling in accordance with claim 16, wherein said
2 indicator or said electronic system indicates operational condition of said lifting sling,
3 suitability for use of said lifting sling, or security status of an article secured by said
4 lifting sling.

5

- 1 19-24 (Canceled)

2

- 1 25. (Currently Amended) A lifting sling, said lifting sling comprising:

2

- 3 a plurality of core fibers forming a ~~said lifting~~ sling body;

4

- 5 a coating comprised of at least an isocyanate mixed with an amine forming
6 polyurea;

7

- 8 an electronic system secured by said coating proximate to said plurality of core
9 fibers;

10

- 11 said coating further comprising:

DCARML-010

- 7 -

12

13

an initial layer of said coating that seals said plurality of core fibers from exposure to contaminants;

14

15

16

a plurality of additional layers applied to areas of said ~~lifting~~ sling body subject to high crush and shear forces; and

17

18

19

a final splatter layer of said coating applied along said ~~lifting~~ sling body, said final splatter layer creating a rugged textured non-slip grip exterior surface.

20

21

22

1 26. (Previously Presented) The lifting sling in accordance with claim 25, further
2 comprising a cover, said cover being fitted around said plurality of core fibers, said cover
3 is coated with said coating.

4

1 27. (Previously Presented) The lifting sling in accordance with claim 25, further
2 comprising a cover, said cover being fitted around said plurality of core fibers, said cover
3 is coated and secured into position with said coating.

4

1 28. (Canceled)

2

1 29. (Currently Amended) A lifting sling, said lifting sling comprising:

2

3 a plurality of core fibers forming a ~~said lifting~~ sling body;

4

5 a coating comprised of at least an isocyanate mixed with an amine forming
6 polyurea;

DCARML-010

- 8 -

7

8

said lifting sling further comprising at least one of the following:

9

10

i) an indicator secured by said coating proximate to said plurality of core fibers; or

11

12

ii) an electronic system secured by said coating proximate to said plurality of core fibers;

13

14

15

said coating further comprising:

16

17

an initial layer of said coating that seals said plurality of core fibers from exposure to contaminants;

18

19

20

a plurality of additional layers applied in areas of said [lifting] sling body subject to high crush and shear forces; and

21

22

23

a final splatter layer of said coating applied along said [lifting] sling body, said final splatter layer creating a rugged textured non-slip grip exterior surface;

24

25

26

27

wherein said indicator or said electronic system indicates operational condition of said lifting sling, suitability for use of said lifting sling, or security status of an article secured by said lifting sling.

28

29

30

1 30. (Canceled)

2

DCARML-010

- 9 -

1 31. (Previously Presented) The lifting sling in accordance with claim 29, wherein said
2 lifting sling further comprising a safety core bonded by said coating proximate to said
3 plurality of core fibers, ends of said safety core are concealed within said coating.
4

1 32. (Canceled)
2

1 33. (Previously Presented) The lifting sling in accordance with claim 1, further
2 comprising a cover, said cover being fitted around said plurality of core fibers, said cover
3 is coated with said coating.
4

1 34. (Currently Amended) The lifting sling in accordance with claim 1, wherein single-
2 core said [lifting] sling body is formed by full seaming said plurality of core fibers with
3 said coating and multi-core said [lifting] sling body is formed by partial seaming said
4 plurality of core fibers with said coating.
5

1 35. (Currently Amended) The lifting sling in accordance with claim 25, wherein single-
2 core said [lifting] sling body is formed by full seaming said plurality of core fibers with
3 said coating and multi-core said [lifting] sling body is formed by partial seaming said
4 plurality of core fibers with said coating.
5

1 36. (Currently Amended) The lifting sling in accordance with claim 29, wherein single-
2 core said [lifting] sling body is formed by full seaming said plurality of core fibers with
3 said coating and multi-core said [lifting] sling body is formed by partial seaming said
4 plurality of core fibers with said coating.
5

1 37. (Previously Presented) The lifting sling in accordance with claim 1, further
2 comprising a cover, said cover being fitted around said plurality of core fibers, said cover
3 is coated and secured into position with said coating.

DCARML-010

- 10 -

4

1 38. (Previously Presented) The lifting sling in accordance with claim 29, further
2 comprising a cover, said cover being fitted around said plurality of core fibers, said cover
3 is coated with said coating.

4